What is claimed is:

1. A heater, comprising:

a) a heater core including at least one heat generating element;

b) a heat chamber disposed within said heater core;

c) an air conduit surrounding an outer surface of said heater core and communicating with said heat chamber;

wherein upon injection of air into said air conduit, heat from the heater core is transferrred to the injected air while the air flows through said air conduit and into said heat chamber, thereby heating the injected air to a predetermined temperature without bringing the air into contact with the heat generating element.

2. A heater according to claim 1, wherein said predetermined temperature is sufficient to remove an outer coating of an optical fiber.

3. A heater according to claim 1, wherein said predetermined temperature is from about 700 degrees C to about 1100 degrees C.

4. A heater according to claim 1, wherein the time required to heat the injected air to said predetermined temperature does not exceed about 30 seconds.

5. A heater according to claim 1, wherein said air conduit includes an input end for receiving air and an opposite end, and is welded to said heat chamber at said opposite end.

6. A heater according to claim 1, wherein said air conduit has a substantially spiral-shaped configuration.

7. A heater according to claim 6, wherein said spiral-shaped air conduit forms a helical coil defining a plurality of turns.

8. A heater according to claim 7, wherein said helical coil has an inner diameter of about 1.5 inches.

9. A heater according to claim 1, wherein said heater core has a substantially cylindrical shell structure.

10. A heater according to claim 7, wherein an inner space is defined between an outer surface of the heat chamber and an inner surface of the helical coil, said inner space being shaped to allow insertion of said heater core therein and removal of said heater core therefrom.

11. A heater according to claim 1, wherein said heater core and said heat chamber is made of quartz.

12. A heater according to claim 1, wherein said heat generating element comprises a conductive filament configured to generate heat upon application of an electrical potential across the filament.

13. A heater according to claim 12,

wherein said conductive filament is adapted to be threaded around said cylindrical body so as to define conductive coils that surround said cylindrical body and radiate heat energy upon application of the electrical potential.

14. A heater according to claim 13,

wherein said conductive coils define a heat flow path for said heat energy in a first direction radially inward of said conductive coils and then radially outward of the coils in a second and substantially opposite direction .

15. A heater according to claim 1, wherein said heater core is a replaceable heater core.

16. A heater according to claim 1, wherein the life span of the replaceable heater core is about 5000 hours.

17. A heater according to claim 1, wherein the heater is characterized by a length of about 10 inches and a width of about 4 inches.

18. A heater according to claim 1, further comprising a temperature controller for controlling the temperature in the heat chamber.

19. A heater according to claim 1,

wherein said heater core comprises a plurality of tubular elements, each tubular element having a first end and an opposite end, each of said plurality of tubular elements being disposed side by side in a spaced-apart relationship along an annulus; and

wherein said tubular elements are welded to one another at locations in the vicinity of the first end and the opposite end of each tubular element, thereby forming a sidewall of a cylindrical shell structure.

20. A heater according to claim 19, wherein each of said plurality of tubular elements has an outer diameter of about 3 mm, and an inner diameter of about 2 mm, and wherein the spacing between adjacent tubular elements is about 3 mm.

21. A heater for heating a substance, the heater including:

a) a heater core including at least one heat generating element;

b) an inner heat chamber concentrically disposed within said heater core;

c) a conduit having an input end and coupled to said heat chamber at a second end, said conduit surrounding an outer surface of said heater core;

wherein upon injection of the substance into said input end of said conduit, heat is transferred from said heat generating element to the substance while the substance flows through said conduit from said input end to said second end and

during passage of the substance through said conduit so that the substance is heated within a predetermined time to a predetermined temperature without coming into contact with the heater core.

22. A heater according to claim 21, wherein said predetermined temperature is sufficient to remove an outer coating of an optical fiber.

23. A heater according to claim 21, wherein said substance is one of a gas, a fluid, and air.

24. A system for heating air, comprising:

a) a source of air;

b) means for generating one or more air streams from said air source by releasing compressed air from said air source during relatively short periods of time; and

c) a heater for heating said air streams to a predetermined temperature sufficient to remove the outer coating from the optical fiber, the heater including:

i) a heat generating element for generating heat; and

ii) a heat exchanger allowing heat from said heat generating element to be transferred to an air stream while maintaining said air stream isolated from said heat source.

25. A heating system, comprising:

a) a supply of a heating substance;

b) a regulator for regulating the flow of said substance from said supply, said regulator including means for periodically and controllably releasing said substance from said supply during relatively short intervals of time; and

c) a heater for heating said substance to a temperature sufficient to remove the

coating from the optical fiber, including:

i) a heat source for generating heat; and

ii) means for transferring heat from said heat source to said substance while maintaining said substance isolated from said heat source.

26. A heating system according to claim 25, wherein said heating substance comprises at least one of air, a gas, and a fluid.